PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 042688woMe-GS/do	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP2004/053608	International filing date *(day/month/year)* 20.12.2004	Priority date *(day/month/year)* 19.12.2003
International Patent Classification (IPC) or both national classification and IPC A61K35/16, A61P7/02		
Applicant OCTAPHARMA AG.et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
17.10.2005	20.03.2006
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Thalmair-De Meyere, Telephone No. +49 89 2399-2177

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP2004/053608

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-6 as originally filed

Claims, Numbers

1-11 received on 08.03.2006 with letter of 07.03.2006

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   - ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
   - ☐ the language of publication of the international application (under Rule 48.3(b)).
   - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   - ☐ contained in the international application in written form.
   - ☐ filed together with the international application in computer readable form.
   - ☐ furnished subsequently to this Authority in written form.
   - ☐ furnished subsequently to this Authority in computer readable form.
   - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
   - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   - ☐ the description, pages:
   - ☐ the claims, Nos.:
   - ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-11
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-11
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-11
	No:	Claims	

2. Citations and explanations

see separate sheet

Section V

The newly filed set of claims 1-11 (as received on 08.03.2006 with letter of 07.03.06) is acceptable for the following reasons.

The blood plasma of claim 1 is obtained without admixing blood or blood plasma of blood group 0 at all. Contrary to that, in **D 2** (abstract of CN1321468) 0.5-3 portions of plasma type 0 are required. **D 1** (WO 9907390) discloses a blood plasma comprising
6 to 10 parts of blood or blood plasma derived from donors having the blood group A,
1 to 3 parts of blood or blood plasma derived from donors having the blood group B,
0.0 to 1.5 parts of blood or blood plasma derived from donors having the blood group AB,
substantially no blood or blood plasma derived from donors having the blood group 0.
Compared to that, the blood plasma presently claimed comprises
5 to 6 parts of blood or blood plasma derived from donors having the blood group A,
4 to 5 parts of blood or blood plasma from donors having the blood group B,
0 to 1 part of blood or blood plasma from donors having the blood group AB,
no blood or blood plasma of blood group 0.

Moreover, **D 1** teaches towards including significantly more blood plasma of group A than of group B, since the ratio of blood plasma from group A and group B according to D 1 is from 2:1 (6:3) to 10:1.

Surprisingly, in the present application it was found that when the donor population comprises more than 10% of a non-Caucasian population, such as donors of African-American, Hispanic or native American origin, the ratios have to be altered significantly, such that the amount of blood plasma of group A is equal to or only up to 50% above the amount of blood plasma of group B, as in amended claim 1.

As this could not be expected in view of the prior art, the pooled plasma of the application is inventive in view of the prior art.

Furthermore, in general, the skilled person knows that when more than 10 % of the donors are from a non-Caucasian population, he/she has to select the amounts of blood plasma of groups A, B, and AB within the narrow ranges of claim 1. In addition, he/she knows from the working examples 1 and 2 that a reasonable starting point for making a choice within the ranges is using blood plasma from the different groups, which are all obtained in a considerable portion from non-Caucasian donors. From this starting point, the titer of anti-A and anti-B antibodies can be determined by routine testing methods. Obviously each pooled blood plasma is inherently from different donors and of a different composition, and claim 1 in view of the description and the examples provides sufficient guidance how to prepare a

pooled blood plasma facing the specific problem that a certain portion of a non-Caucasian population is amongst the donors.

Claims

1. A blood plasma for human use pooled from donors which belong to 10 % or more to a non-Caucasian population, the plasma obtainable by mixing blood or blood plasma of blood groups A and B, optionally AB without admixing ~~substantial amounts of~~ blood or blood plasma of blood group 0 characterized in that
   - ~~four~~ five to ~~eight~~ six parts of blood or blood plasma from donors having the blood group A,
   - ~~more than three~~ four parts to ~~seven~~ five parts of blood or blood plasma from donors having the blood group B,
   - zero to ~~two~~ one parts of blood or blood plasma from donors having the blood group AB.
2. The blood plasma according to claim 1 virus-inactivated by any virus inactivation or virus removal method.
3. The blood plasma according to claim 2 wherein the blood plasma was inactivated by solvent/detergent treatment, irradiation, pasteurisation and/or nanofiltration.
4. The blood plasma according to claim 3 wherein the virus inactivation was performed by using detergents such as oxyethylated polyphenols, like Triton-X-100, and/or polyoxyethylene derivatives of fatty acids such as Tween 80 and tri-N-butylphosphate (TNBP), or combinations thereof.
5. The blood plasma according to claim 3 virus inactivated by treatment with long-chain fatty acids, such as caprylic acid or the respective salts.
6. The blood plasma according to any of the forgoing claims substantially free of virus inactivating agents.

7. The blood plasma of any one of the foregoing claims having ABO blood group specific antibody titre lower than 16 for anti-A and anti-B IgM antibodies, and lower than 64 for anti-A and anti-B IgG antibodies.

8. The blood plasma of any of the foregoing claims in liquid, frozen, dried, or lyophilised form.

9. A pharmaceutical composition comprising the blood plasma of any one of the claims 1 to 8.

10. Use of the blood plasma of any of the foregoing claims for the manufacturing of a medicament for the treatment of coagulation factor deficiencies, thrombotic purpura, and in repeated large volume plasma exchange.

11. A process for manufacturing the blood plasma of any one of the claims 1 to 8 by admixing

- four to eight parts of blood or blood plasma from donors having the blood group A,
- more than three parts to seven parts of blood or blood plasma from donors having the blood group B,
- zero to two parts of blood or blood plasma from donors having the blood group AB.